UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,982	08/28/2006	Ikuo Mimura	03933.000600.	2590

5514 7590 10/22/2010

FITZPATRICK CELLA HARPER & SCINTO
1290 Avenue of the Americas
NEW YORK, NY 10104-3800

EXAMINER	
HIGGINS, GERARD T	
ART UNIT	PAPER NUMBER
1785	

MAIL DATE	DELIVERY MODE
10/22/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/590,982	MIMURA, IKUO	
	Examiner	Art Unit	
	GERARD T. HIGGINS	1785	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 September 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 7-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 7-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed 09/17/2010 has been entered. Currently claims 1-3 and 7-9 are pending and claims 4-6 are cancelled.

Specification

2. The disclosure is objected to because of the following informalities:

At page 17, lines 18-21, the phrase "substrate-adhesive layer (5) and an auxiliary substrate (26)" is objected to grammatically because it is at least clear from Figure 2 and page 17, lines 24-25 that the part **26** is not apart of the part **25**. This objection can be overcome by changing the phrase to "and a substrate-adhesive layer (5)" which is how the section will be interpreted.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claims 1-3 and 7-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With regard to claim 1, the Examiner does not find support to claim a “display device comprising…an auxiliary substrate” in the specification as originally filed. This is clear from at least page 14, lines 5-7 wherein applicants’ specification describes that the “display device…can be adhered to another auxiliary substrate” and Figure 2. These parts of the specification clearly show that the display device does not "comprise" the auxiliary substrate as claimed. The portion of the specification at page 17, lines 18-21 does not agree with the rest of the specification. The totality of evidence in the specification, i.e. page 14, lines 5-7, Figure 2, and page 17, lines 24-25, indicates that the auxiliary substrate is not apart of the display device and the portion at page 17, lines 18-21 are in error. See also section 2 above.

Claim Rejections - 35 USC § 103

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hingsen-Gehrmann et al. (US 2002/0142121) in view of Yamamoto et al. (US 2002/0036359) and Chirhart et al. (4,919,741).

With regard to claim 1, Hingsen-Gehrmann et al. disclose the tamper-indicating articles, which read on applicants’ display device, of Figures 1, 2, and 5.

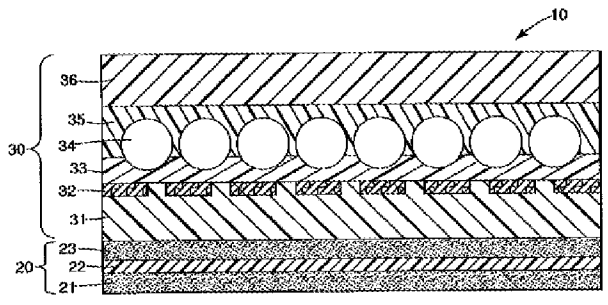

Fig. 1

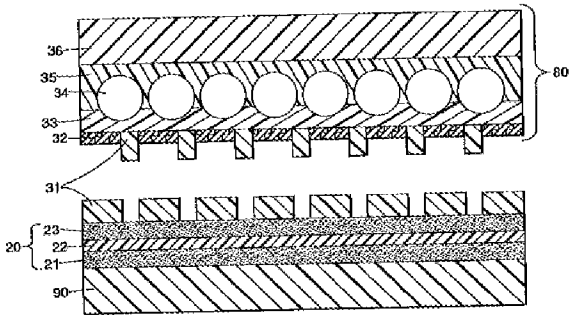

Fig. 2

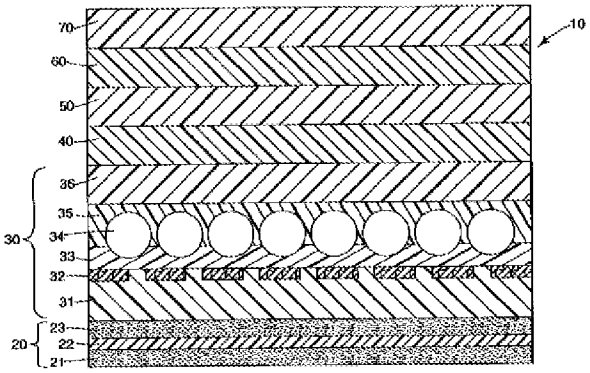

Fig. 5

The device is comprised of a top film **70**, which reads on applicants' surface-protective layer, a print layer **60**, which reads on applicants' information display layer, the layers **33** through **36**, which together read on applicants' light-reflective resin sheet, and an adhesive layer **20**, which reads on applicants' substrate adhesive layer [0034]-[0052], [0069] and [0079]. There is a reflective layer **31**, which reads on applicants' specular reflective layer, that is overlapping the light-reflective resin sheet via a release layer **32**, which reads on applicants' destructive layer installed on one side thereof, and the device is installed on an substrate **90**, which reads on either of applicants' auxiliary substrate or installation substrate, via the adhesive layer; further, when the device is tampered with it results in the structure seen in Figure 2 [0072]. Hingsen-Gehrmann et al. teach that their release layer is preferably made of polyesters [0059]. There is a destructive effect wherein separation takes place between the release layer and one of the other layers constituting the retroreflective sheet; however, the Examiner notes that Hingsen-Gehrmann et al. fail to disclose an auxiliary substrate having a size larger than

the display device so as to be capable of wrapping-up the display device, and they also fail to disclose the polymer resins of the destructive layer as claimed.

Chirhart et al. disclose an information plate having retroreflective sheeting of their Figure 1.

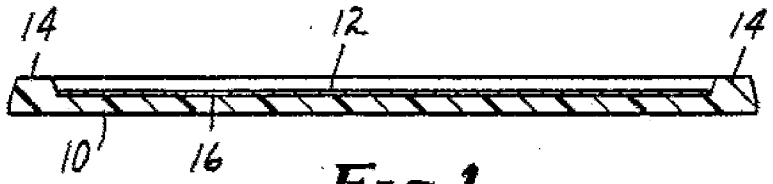

FIG. 1

The article is comprised of a retroreflective sheeting **12**, which reads on applicants' display device, and plate blank **10**, which read on applicants' auxiliary substrate (col. 3, line 65 to col. 4, line 2). It is clear from the Figure that the auxiliary substrate is a size larger than said display device and the auxiliary substrate is capable of wrapping-up said display device. This article is a license plate (col. 1, lines 15-17), which will be installed somewhere on a car, typically a bumper. The fact that a license plate is installed, i.e. mechanically fixed, on a car or a car bumper is intrinsic in the reference and would be known to those of ordinary skill in the art. The car or its bumper would read on applicants' installation substrate.

Since Hingsen-Gehrmann et al. and Chirhart et al. are drawn to display devices including retroreflective elements; it would have been obvious to one having ordinary skill in the art at the time the invention was made to adhere the display device of Hingsen-Gehrmann et al. onto the auxiliary substrate of Chirhart et al. The motivation for doing so would be to provide greater strength and rigidity to the retroreflective sheet (col. 3, lines 60-64). The display device with the print layer of Hingsen-Gehrmann et al.

in view of the teachings of the information plate having retroreflective sheeting of Chirhart et al. being used as a license plate (col. 1, lines 15-17) reads on applicants' requirement that the display device is "being a number plate." One of ordinary skill would know to make a license plate having a combination of numbers and letters using the retroreflective sheeting of Hingsen-Gehrmann et al.

Yamamoto et al. disclose that resins based on cyclopentane ring residues and polyester resins are exchangeable in optical articles [0025] to [0035]. They state that the residues are known for toughness and transparency, both important qualities for optical articles [0026] and [0033]. The hydrocarbon based residues has a small optical anisotropic effect [0042]. One of ordinary skill would recognize that all of these effects would be crucial in retroreflective display articles.

Since Hingsen-Gehrmann et al. and Yamamoto et al. are both drawn to optical articles; it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the hydrocarbon based resins such as cyclopentane, norborene, or adamantane of Yamamoto et al. for the polyester based resins of Hingsen-Gehrmann et al. The motivation for doing so would be to result in an optical article in excellent transparency, toughness, and small optical anisotropic effects.

With regard to the thickness of the surface-protective layer being 30 to 20000 microns, Hingsen-Gehrmann et al. teach that the top film **70**, which reads on applicants' surface-protective layer, can be any suitable thickness and may be made from polyvinyl chloride [0083]. They also teach at [0127]-[0128] that the outermost light incident layer

of the retroreflective sheeting could be transparent polyvinylchloride having a thickness of 62 microns.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the thickness of the surface-protective layer any amount including 30 to 20000 microns in order to provide a coating that would provide the proper durability in the desired environment in which the display device was to be used [0083]; furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the top film **70** be a 62 microns thick PVC layer which is a preferential thickness taught by Hingsen-Gehrmann et al. for an outermost polyvinyl chloride layer.

With regard to the percent light transmission of 50-95 %, the top film **70** of Hingsen-Gehrmann et al. described above would have the same thickness and be made of the same preferential material as described by applicants; therefore, the top film **70** of Hingsen-Gehrmann et al. described above would intrinsically possess the light transmission claimed.

Alternatively, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the percent light transmission of the surface-protective layer any amount, including 50-95 % as claimed, in order to have a surface layer that was transparent enough such that the retroreflective layer and the printed layer could be easily seen at long distances.

5. Claims 2, 3, and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hingsen-Gehrmann et al. (US 2002/0142121) in view of Yamamoto et al. (US 2002/0036359) and Chirhart et al. (4,919,741), as applied to claim 1, and further in view of Mimura (WO 02/103629), wherein the national stage application US 2004/0218273 will be used as a direct English translation.

With regard to claims 2 and 3, Hingsen-Gehrmann et al. in view of Yamamoto et al. and Chirhart et al. disclose all of the limitations of applicant's claim 1 in section 4 above, including disclosing glass micro beads in the light-reflective resin sheet **34** [0055]; however they fail to disclose a focusing layer in between a specular reflective layer and said glass micro beads. They also fail to disclose an embodiment wherein the light-reflective resin sheet is a microprismatic retroreflective sheeting layer formed of microprisms and a specular reflective layer installed on the reflective side faces of the microspheres.

Mimura disclose cube-corner prismatic retroreflective elements in a light reflective resin sheet [0028] to [0030]. Mimura also discloses enclosing micro glass beads in a thin film resin layer "for adjusting their focal distance where necessary" [0032]. This reads on applicants' focusing layer.

Since Hingsen-Gehrmann et al. in view of Yamamoto et al. and Chirhart et al., and also Mimura are drawn to display devices using retroreflective sheets; it would have been obvious to one having ordinary skill in the art at the time the invention was made to add in a focusing layer as taught by Mimura into the device of Hingsen-Gehrmann et al. such that one could properly tune the focal length to arrive at a display device that

would properly reflect light back at the correct angle. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the cube-corner prismatic retroreflective elements of Mimura in place of the glass beads in the light reflective resin sheet of Hingsen-Gehrmann et al. The results of these substitutions would have been predictable to one having ordinary skill; further, the elements are known equivalents and would perform predictably.

With regard to claims 7-9, Hingsen-Gehrmann et al. in view of Yamamoto et al. and Chirhart et al. disclose all of the limitations of applicant's claims 1 in section 13 above; however, they fail to disclose the RFID communication device and antenna installed on the back of the display device; specifically, wherein a section of the specular reflective layer is removed in order to install said RFID communication device and antenna. They also fail to disclose a situation wherein the specular reflective layer is partially installed in order to form the communication device.

Mimura disclose a RFID communication device with an antenna attached to the back of the display device at [0102] to [0109]; further, they disclose removing a portion of the specular reflective layer in order to improve the sensitivity of the antenna/communication device [0108] to [0109]. Mimura also discloses a situation wherein the specular reflective layer is formed as the antenna itself [0107].

Hingsen-Gehrmann et al., Yamamoto et al., Chirhart et al., and Mimura are all drawn to optical display media; it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine in the RFID communication device onto the back of the display device of Hingsen-Gehrmann et al. in view of

Yamamoto et al. and Chirhart et al. The results would have been completely predictable to one having ordinary skill; specifically, it would prevent identity thefts, wherein thieves use the RFID to pay tolls illegally.

With regard to the functional limitations in claim 9 that "when the display device is peeled off from the installation substrate, the specular reflective layer is broken and loses its antenna function," intended use limitations are not dispositive of patentability. The device of Hingsen-Gehrmann et al. in view of Yamamoto et al. and Chirhart et al. and further in view of Mimura disclose a display device identical to that claimed, and therefore the Examiner deems it capable of performing the intended use.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-3 and 7-9 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5 and 8-10 of copending Application No. 10/569,869 in view of Chirhart et al. (4,919,741) and Mimura (WO 02/103629).

Although the conflicting claims are not identical, they are not patentably distinct from each other because they are both related to a retroreflective sheeting that is comprised of a surface protective layer (surface layer), a substrate-adhesive layer (adhesive layer), and a light-reflective resin sheet (retroreflective element layer). The destructive layer is installed in between the specular reflective layer (see copending claim 10) and micro glass beads (focusing layer) of the retroreflective element. The resins that comprise the destructive layer overlap. When the device is peeled from a substrate it will peel such that the specular reflective layer remains on the substrate; however, the copending application fails to disclose the device is useful as a display device or a number plate, an information display layer, an auxiliary substrate, an installation substrate, a microprismatic retroreflective sheeting layer formed of microprisms, the thickness of the surface protective layer, and the RFID structure of pending claim 7-9.

Applicant's attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be

examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438,164 USPQ 619,622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to page 1, lines 21-27 of the specification of copending Application No. 10/569869 which discloses that the retroreflective sheeting is useful as traffic signs or a number plate, which reads on the presently claimed display device. Additionally, on page 6, lines 29-32 there is a disclosed a printed layer that reads on the presently claimed information display layer and on page 19, lines 4-5 a transparent surface layer, which reads on the presently claimed surface-protective layer, may be formed to be 38 microns thick; therefore, it would have been obvious to one of ordinary skill in the art to make the copending retroreflective sheeting into a display device or number plate, including an information display layer as presently claimed, and also for making the surface-protective layer a transparent material having the thickness claimed. The motivation for including these is that retroreflective elements are ubiquitous in the field of road signage because they are seen at long distances; further, indicia in such retroreflective display elements would provide information that was also seen at long distances. This surface-protective layer will intrinsically display the percent light transmission claimed.

Chirhart et al. disclose an information plate having retroreflective sheeting of their Figure 1.

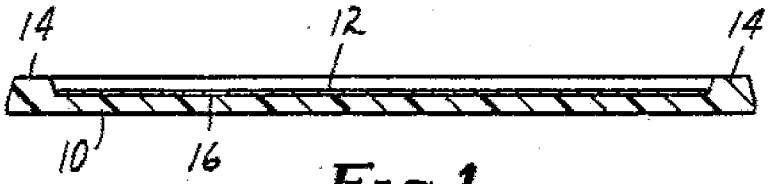

FIG. 1

The article is comprised of a retroreflective sheeting **12**, which reads on applicants' display device, and plate blank **10**, which read on applicants' auxiliary substrate (col. 3, line 65 to col. 4, line 2). It is clear from the Figure that the auxiliary substrate is a size larger than said display device and the auxiliary substrate is capable of wrapping around or wrapping-up said display device. This article is a license plate (col. 1, lines 15-17), which will be installed somewhere on a car, typically a bumper. The fact that a license plate is installed on a car or a car bumper is intrinsic in the reference and would be known to those of ordinary skill in the art. The car or its bumper would read on applicants' installation substrate.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adhere the retroreflective sheeting of the copending claims onto the auxiliary substrate and installation substrate as taught by Chirhart et al. The motivation for doing so would be to provide greater strength and rigidity to the retroreflective sheet (col. 3, lines 60-64).

Mimura disclose cube-corner prismatic retroreflective elements in a light reflective resin sheet [0028] to [0030].

Mimura disclose a RFID communication device with an antenna attached to the back of the display device at [0102] to [0109]; further, they disclose removing a portion of the specular reflective layer in order to improve the sensitivity of the

antenna/communication device [0108] to [0109]. Mimura also discloses a situation wherein the specular reflective layer is formed as the antenna itself [0107].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the cube-corner prismatic retroreflective elements of Mimura in place of the glass beads in the light reflective resin sheet of the pending claims. The results of these substitutions would have been predictable to one having ordinary skill; further, the elements are known equivalents and would perform predictably.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine in the RFID communication device onto the back of the display device of the pending claims. The results would have been completely predictable to one having ordinary skill; specifically, it would prevent identity thefts, wherein thieves use the RFID to pay tolls illegally.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

8. Applicant's arguments, see Remarks, filed 09/17/2010, with respect to the provisional rejection of claims 1-3 and 7-9 under 103(a) as being obvious over Application No. 10/569869 in view of Shimizu and Mimura have been fully considered and are persuasive. The relevant rejection has been withdrawn.

Applicants' statement of common ownership on page 10 of their Remarks is sufficient to overcome the above rejection.

9. Applicant's arguments filed 09/17/2010 have been fully considered but they are not persuasive.

Applicants argue that their specification supports a display device including an auxiliary substrate at least at page 17, lines 18-21.

The Examiner respectfully disagrees and notes sections 2 and 3 above. The section of the specification cited by applicants is in contradiction to the rest of the specification as a whole, i.e. page 14, lines 5-7, Figure 2, and page 17, lines 24-25, which teaches that the auxiliary substrate is not apart of the display device.

Applicants argue that the new limitations added to claim 1 are not taught by the prior art and are not result effective variables.

The Examiner respectfully disagrees and notes that Hingsen-Gehrmann et al. teach that the top film **70**, which reads on applicants' surface-protective layer, can be any suitable thickness [0086]. It would have been obvious to one having ordinary skill to have made the top film any thickness, including those claimed, in order to have the proper durability. Additionally, Hingsen-Gehrmann et al. mention a suitable thickness of an outermost layer of PVC in their retroreflective stack is 62 microns. It would also have been obvious to one having ordinary skill to have made the top film **70** a 62 micron thick PVC film. Applicants' argument that a thickness of a layer is not result-effective variable is not convincing.

With regard to the percent light transmission of 50-95 %, the top film **70** of Hingsen-Gehrmann et al. described above would have the same thickness and be

made of the same preferential material as described by applicants; therefore, the top film **70** of Hingsen-Gehrmann et al. described above would intrinsically possess the light transmission claimed.

Alternatively, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the percent light transmission of the surface-protective layer any amount, including 50-95 % as claimed, in order to have a surface layer that was transparent enough such that the retroreflective layer and the printed layer could be easily seen at long distances. Applicants' argument that a thickness of a layer is not result-effective variable is not convincing.

With regard to the obviousness type double-patenting rejection, given the fact that this rejection is not the only remaining rejection in the case; it has been restated above.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GERARD T. HIGGINS whose telephone number is (571)270-3467. The examiner can normally be reached on M-F 10am-8pm est. (Variable one work-at-home day).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Ruthkosky can be reached on 571-272-1291. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Ruthkosky/
Supervisory Patent Examiner, Art Unit 1785

GERARD T. HIGGINS
Examiner
Art Unit 1785

/G. T. H./
Examiner, Art Unit 1785